

# PROJECT REPORT

## A GLOBAL CO<sub>2</sub> EMISSION ANALYSIS

### 1 INTRODUCTION

#### 1.1 Overview

Global warming is one of the biggest challenges currently being faced by the human race, although correlation is not causation, a likely cause of global warming is due to increased atmospheric carbon dioxide from human activities. **CO<sub>2</sub> Emission** refers to the Carbon Dioxide emitted throughout the world. For this analysis we will be focusing on CO<sub>2</sub> Emissions and its effect on the world we live in as well as some key factors and stats that may play a role in the emission of CO<sub>2</sub> globally. Fossil fuel use is the primary source of CO<sub>2</sub>. The data throws light onto how much fossil fuels are burnt, per year per nation, which amounts to an increase in CO<sub>2</sub> every year. This will help researchers and environment experts to predict global warming. So countries should set a goal to decrease this amount yearly.

Analysing Global Co<sub>2</sub> Emission across countries from 1975 to 2020. This dataset contains a record of Co<sub>2</sub> Emission by each Country and Region of Earth, here we are going to analyse and visualise Country wise, Region wise and Overall Co<sub>2</sub> Emission on Earth.

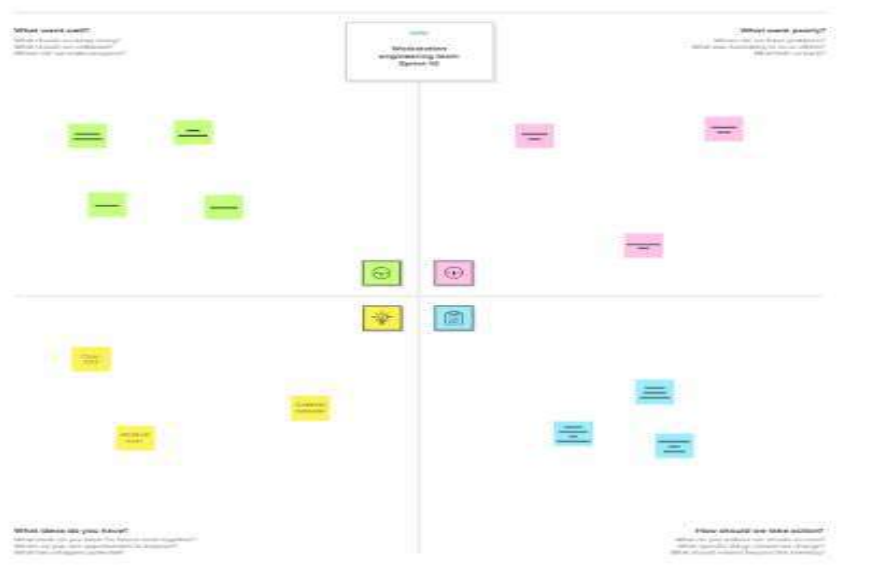
#### 1.2 Purpose

The carbon (and oxygen) in CO<sub>2</sub> can be used as an alternative to fossil fuels in the production of chemicals, including plastics, fibres and synthetic rubber. As with CO<sub>2</sub>-derived fuels, converting CO<sub>2</sub> to methanol and methane is the most technologically mature pathway. The methanol can be subsequently converted into other carbon containing high-value chemical intermediates such as olefins, which are used to manufacture plastics, and aromatics, which are used in a range of sectors including health and hygiene, food production and processing.

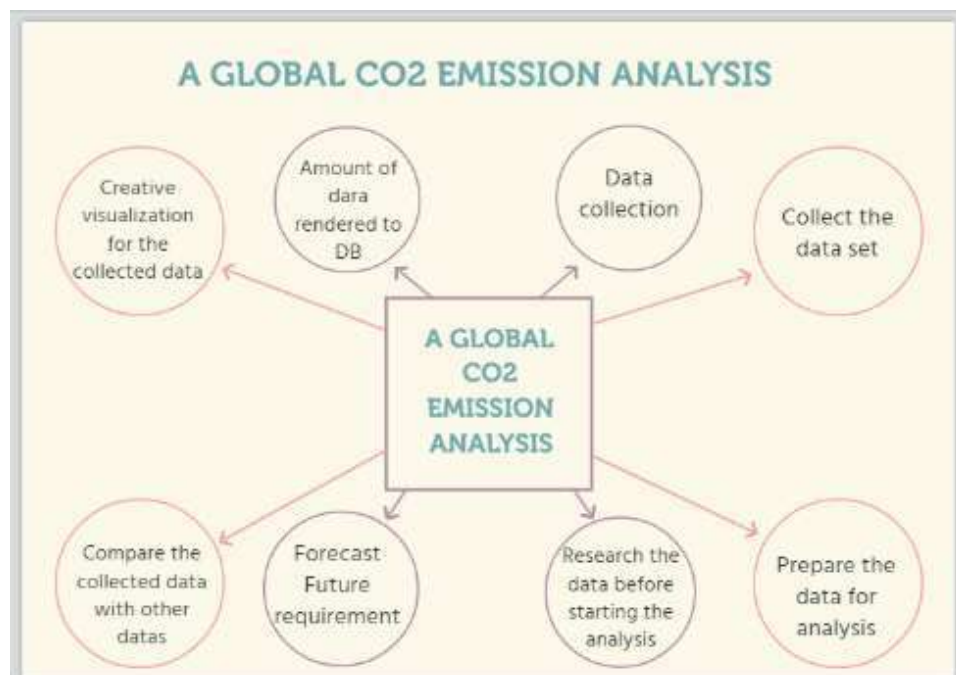
A special group of chemicals, polymers, are used in the production of plastics, foams and resins. The carbon in CO<sub>2</sub> can be used in polymer production by replacing part of the fossil fuel-based raw material in the manufacturing process (Figure 6). Unlike the conversion of CO<sub>2</sub> to fuels and chemical intermediates, polymer processing with CO<sub>2</sub> requires little energy input, because CO<sub>2</sub> is converted into a molecule with an even lower energy state (carbonate). A number of companies are currently operating polymer plants using CO<sub>2</sub> as a raw material.

## 2 PROBLEM DEFINITION & DESIGN THINKING

### 2.1 Empathy Map



### 2.2 Ideation & Brainstorming Map



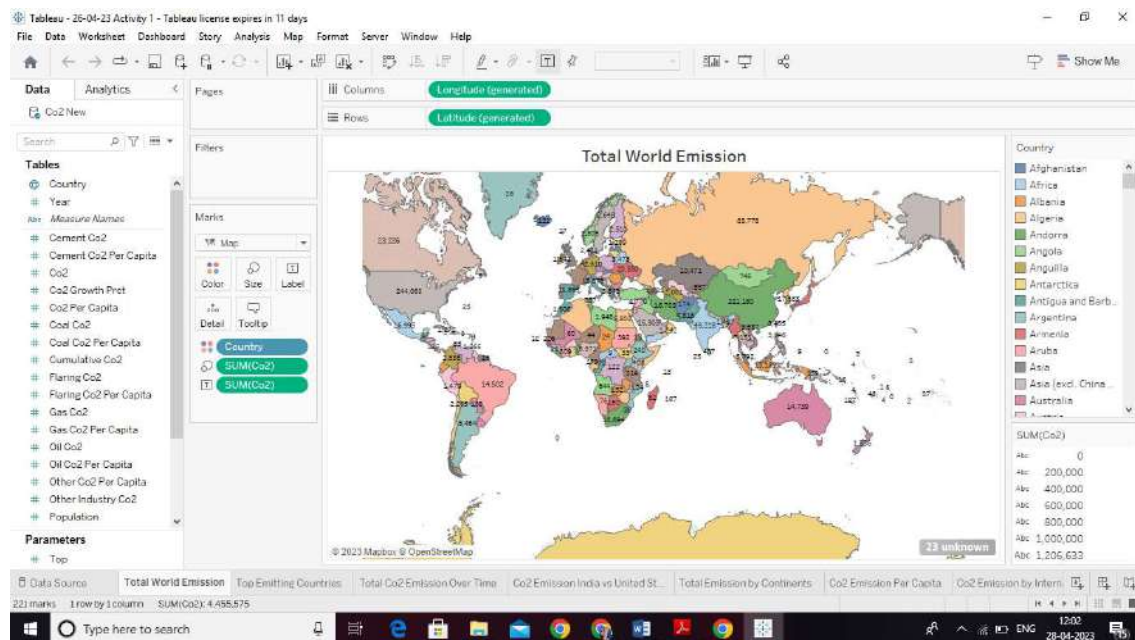
### 3 RESULT

**3.1 Social Impact:** Carbon dioxide emissions are the primary driver of global climate change. It's widely recognised that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions.

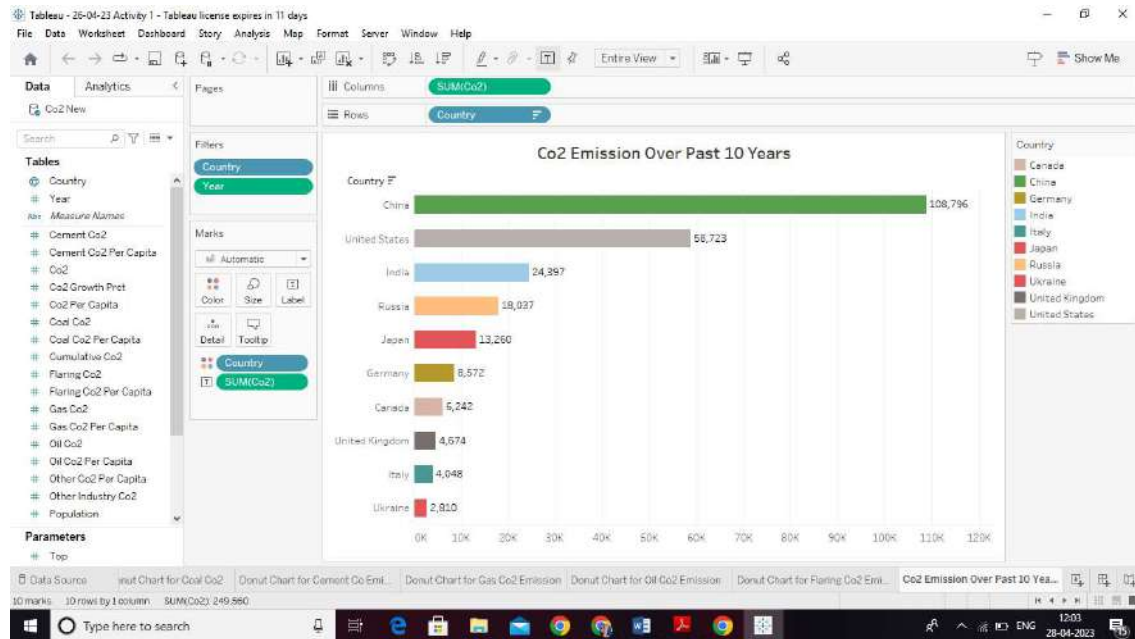
**Business Model/Impact:** By conducting an analysis the countries can identify areas for improvement and take steps to reduce factors that are responsible for Co2 Emission for environmental sustainability by improving the efficiency and transitioning to low carbon alternatives.

### 3.2 Activity & Screenshot

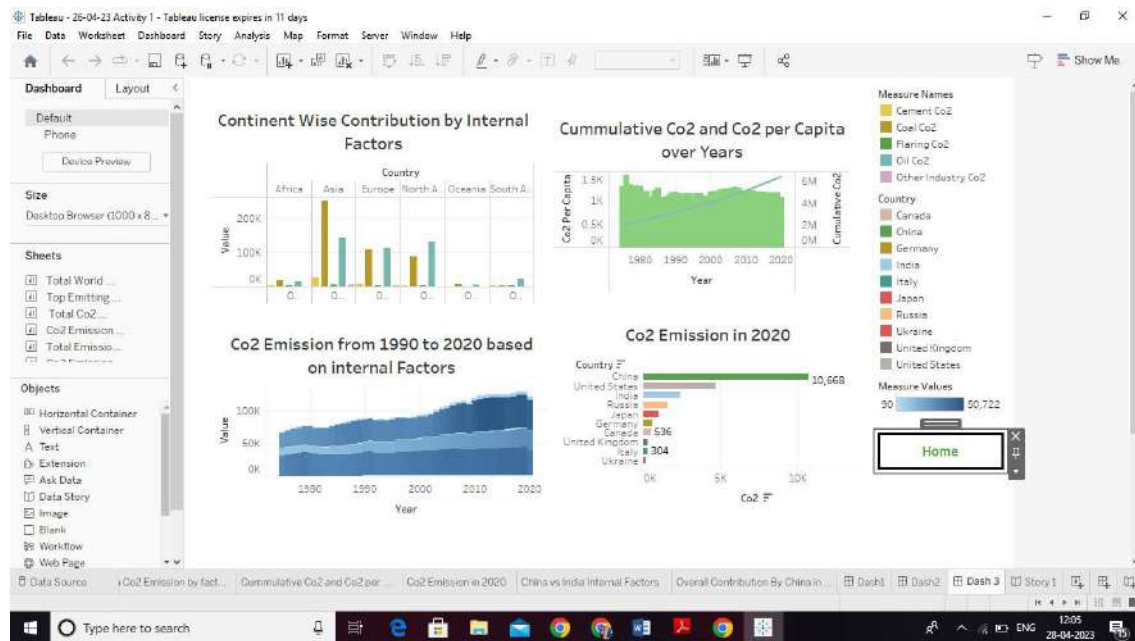
#### Sheet – 1



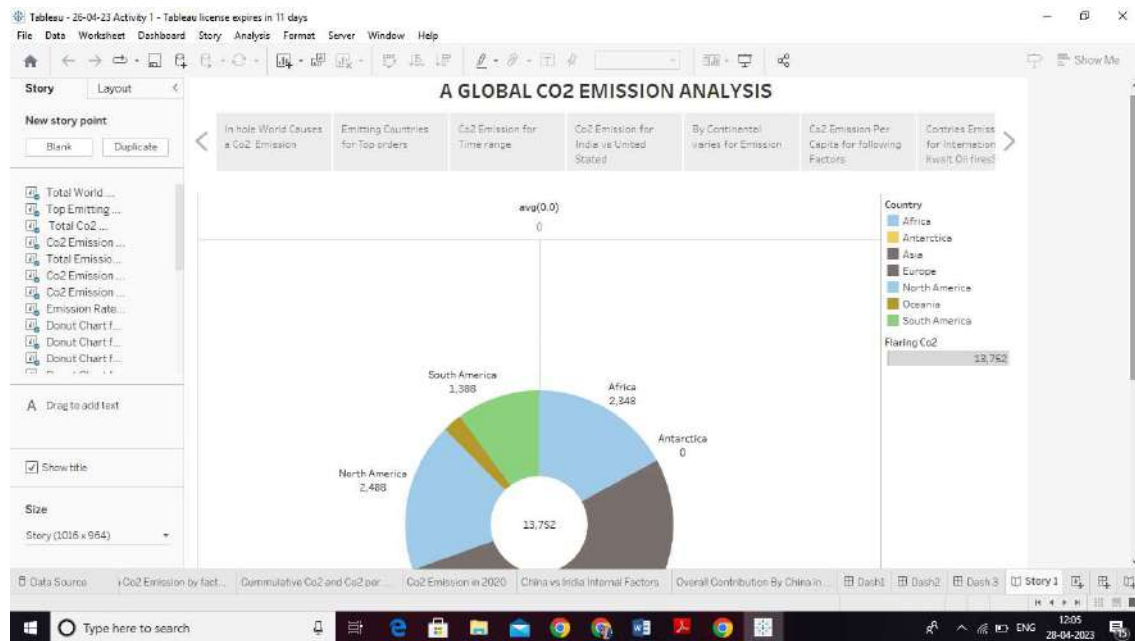
## Sheet – 14



## Dashboard – 3



# Story



## 4 TEAM DETAILS

**Team Lead:** SIVASANKGARE C

**Team Member 1-** KAMALESHWARI K

**Team Member 2-** MEERA JASMINE K

**Team Member 3-** TONYA N

**Team Member 4-** SIRIN RAHMA BANU S

## 5 ADVANTAGES & DISADVANTAGES

### ADVANTAGES

Green plants grow faster with more CO<sub>2</sub>. Many also become more drought-resistant because higher CO<sub>2</sub> levels allow plants to use water more efficiently. More abundant vegetation from increased CO<sub>2</sub> is already apparent.

### DISADVANTAGES

High carbon dioxide levels can cause poor air quality and can even extinguish pilot lights on gas-powered appliances.

## **6 APPLICATIONS**

The carbon in CO<sub>2</sub> can be used to produce fuels that are in use today, including methane, methanol, gasoline and aviation fuels.

## **7 CONCLUSION**

We conclude from this project the rising level of atmospheric CO<sub>2</sub> could be the one global natural resource that is progressively increasing food production and total biological output, in a world of otherwise diminishing natural resources of land, water, energy, minerals, and fertilizer.

## **8 FUTURE SCOPE**

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## **APPENDIX**

### **SOURCE CODE-DASHBOARD:**

[https://public.tableau.com/views/Co2emissiondashboard\\_16826544653850/Dash1?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Co2emissiondashboard_16826544653850/Dash1?:language=en-US&:display_count=n&:origin=viz_share_link)

### **SOURCE CODE-STORY:**

[https://public.tableau.com/views/Co2emissionstory\\_16826547408950/Story1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Co2emissionstory_16826547408950/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)